

```

RRRRRRRRRRRRRRR      EEEEEEEEEEEEEEEEEE   MMM          MMM
RRRRRRRRRRRRRRR      EEEEEEEEEEEEEEEEEE   MMM          MMM
RRRRRRRRRRRRRRR      EEEEEEEEEEEEEEEEEE   MMM          MMM
RRR              RRR    EEE                    MMMMMM        MMMMMM
RRR              RRR    EEE                    MMMMMM        MMMMMM
RRR              RRR    EEE                    MMMMMM        MMMMMM
RRR              RRR    EEE                    MMM           MMM   MMM
RRR              RRR    EEE                    MMM           MMM   MMM
RRR              RRR    EEE                    MMM           MMM   MMM
RRRRRRRRRRRRRRR      EEEEEEEEEEEEEEEEEE   MMM          MMM
RRRRRRRRRRRRRRR      EEEEEEEEEEEEEEEEEE   MMM          MMM
RRRRRRRRRRRRRRR      EEEEEEEEEEEEEEEEEE   MMM          MMM
RRR              RRR    EEE                    MMM          MMM
RRR              RRR    EEE                    MMM          MMM
RRR              RRR    EEE                    MMM          MMM
RRR              RRR    EEE                    MMM          MMM
RRR              RRR    EEE                    MMM          MMM
RRR              RRR    EEE                    MMM          MMM
RRR              RRR    EEE                    MMM          MMM
RRR              RRR    EEEEEEEEEEEEEEEEEE   MMM          MMM
RRR              RRR    EEEEEEEEEEEEEEEEEE   MMM          MMM
RRR              RRR    EEEEEEEEEEEEEEEEEE   MMM          MMM

```


(1)	39	HISTORY
(1)	48	DECLARATIONS
(1)	89	PROCESS Q10

```

0000 1      .TITLE  REMGETIRP - PROCESS IRP'S
0000 2      .IDENT  'V04-000'
0000 3
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0000 5 :*****
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0000 24 :*
0000 25 :*
0000 26 :*****
0000 27 :
0000 28 :++
0000 29 : FACILITY: REMOTE I/O ACP
0000 30 :
0000 31 : ABSTRACT:
0000 32 :   THIS MODULE PERFORMS STATE TRANSITIONS FOR
0000 33 :   LOGICAL LINKS AND FOR NSP.
0000 34 :
0000 35 : ENVIRONMENT:
0000 36 :   MODE = KERNEL
0000 37 :--

```


REMGETIRP
V04-000

- PROCESS IRP'S
HISTORY

J 5

16-SEP-1984 02:08:57 VAX/VMS Macro V04-00
5-SEP-1984 02:53:49 [REM.SRC]REMGETIRP.MAR;1

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(1)

0000	39	:	SBTTL	HISTORY	
0000	40	:	AUTHOR:	SCOTT G. DAVIS,	CREATION DATE: 06-JUL-1979
0000	41	:			
0000	42	:	MODIFIED BY:		
0000	43	:			
0000	44	:	V03-002	KDM0002	Kathleen D. Morse
0000	45	:		Added \$DYNDEF.	28-Jun-1982
0000	46	:			

```

0000 48      .SBTTL  DECLARATIONS
0000 49      :
0000 50      : INCLUDE FILES:
0000 51      :
0000 52
0000 53      $AQBDEF
0000 54      $DYNDEF
0000 55      $IPLDEF
0000 56      $IRPDEF
0000 57      $PRDEF
0000 58      $RDPDEF
0000 59      $RBFDEF
0000 60      $UCBDEF
0000 61      $VCBDEF
0000 62      :
0000 63      : MACROS:
0000 64      :
0000 65
0000 66      :
0000 67      : EQUATED SYMBOLS:
0000 68      :
0000 69
0000 70      :
0000 71      : OWN STORAGE:
0000 72      :
0000 73
00000000 74      .PSECT  REM_PURE, NOWRT, NOEXE
0000 75
00000000 0000 76 RANGE:  .LONG  0          ; RANGE FOR WORKING-SET PURGE
7FFFFFFF 0004 77      .LONG  <1@31>-1      ; DO IT ALL
0008 78
0008 79 WORK_VECTOR:
00000000* 0008 80      .ADDRESS  REM$MBX_READ  ; Vector of items for work queue processing
00000000* 000C 81      .ADDRESS  REM$RECV_MSG ; Put up a mailbox read
0010 82      ; Put up a link read
00000000 83      .PSECT  REM_IMPURE  NOSHR, NOEXE, RD, WRT
0000 84
00000002 0000 85 UNIT:  .BLKW  1          ; For saving remote's unit no.

```



```
00000000 87 .PSECT REM_CODE,NOWRT
0000 88
0000 89 .SBTTL PROCESS QIO
0000 90 :++
0000 91 : FUNCTIONAL DESCRIPTION:
0000 92 :
0000 93 : REM$MAIN - purge working set and process IRP's from the AQB.
0000 94 : This routine determines what the I/O request type is
0000 95 : and processes CANCEL functions by itself.
0000 96 : For a regular IRP, the data in the associated buffered
0000 97 : io packet is sent to the remote for processing.
0000 98 : For a CANCEL function (ACPCONTROL sans complex buffer),
0000 99 : a message for each IRP using the affected channel
0000 100 : is sent to the remote, who does the actual cancel.
0000 101 :
0000 102 :--
0000 103
0000 104 REM$MAIN::
0000 105 $PURGWS_S W^RANGE ; Purge the working set
000B 106 :
000B 107 : TRY TO DEQUEUE A REQUEST
000B 108 :
000B 109 10$:
52 0000'CF D0 000B 110 MOVL W^REM$GL_Q_HEAD,R2 ; Get address of queue head
53 00 B2 OF 0010 111 REMQUE @ (R2),R3 ; Try to get a packet
11 1C 0014 112 BVC 20$ ; If VC there is one
0016 113 :
0016 114 : Nothing in queue - see whether it is time to go away
0016 115 :
0B A2 95 0016 116 TSTB AQB$B_MNTPCNT(R2) ; Any "volumes" mounted?
03 12 0019 117 BNEQ 15$ ; If NEQ yes
FFE2' 30 001B 118 BSBW REM$CHK_ACPDONE ; See if the ACP is all done
001E 119 15$:
001E 120 :
001E 121 : Go to sleep, my baaaby
001E 122 :
001E 123 $HIBER_S ; Hibernate
E4 11 0025 124 BRB 10$ ; Loop
0027 125 :
0027 126 : There was a request
0027 127 :
0027 128 20$:
50 0A A3 9E 0027 129 MOVAB IRP$B_TYPE(R3),R0 ; Point at block type
80 95 002B 130 TSTB (R0)+ ; Is it a work queue element?
19 12 002D 131 BNEQ 22$ ; If NEQ no
5A 80 9A 002F 132 MOVZBL (R0)+,R10 ; Get the work index
5B 60 D0 0032 133 MOVL (R0),R11 ; Get the device index, maybe
5A 0004'CF4A D0 0035 134 MOVL W^WORK_VECTOR-4[R10],R10 ; Get address of processing routine
50 53 D0 003B 135 MOVL R3,R0 ; Get the address for deallocation
00000000'GF 16 003E 136 JSB G^EXE$DEANONPAGED ; Deallocate the IRP
6A 16 0044 137 JSB (R10) ; Process the element
C3 11 0046 138 BRB 10$ ; Try to dequeue something else
0048 139 22$:
0A 0A A3 91 0048 140 CMPB IRP$B_TYPE(R3),S^#DYN$C_IRP ; Is it an IRP?
28 13 004C 141 BEQL 35$ ; If EQL yes
10 0A A3 91 004E 142 CMPB UCB$B_TYPE(R3),S^#DYN$C_UCB ; Is it a UCB?
1E 12 0052 143 BNEQ 30$ ; If NEQ no - fatal error
```

```
0054 144 :  
0054 145 : There is a UCB in my queue  
0054 146 :  
5B 0080 C3 9A 0054 147 : MOVZBL UCB$B_ERTCNT(R3),R11 ; Get the index  
B0 13 0059 148 : BEQL 10$ ; If EQL none - ignore  
005B 149 :  
005B 150 : The channels to this device may be gone - get rid of it, maybe  
005B 151 :  
FF99' 30 005B 152 : $SETAST_S #0 ; Disable AST's  
0064 153 : BSBW -REMSKILL UCB ; Delete the UCB and break the link  
0067 154 : $SETAST_S #1 ; Enable AST's  
99 11 0070 155 : BRB -10$ ; Try for a packet  
0072 156 : *****  
0072 157 : can't assign channel  
0072 158 : *****  
0072 159 :  
0072 160 30$:  
0072 161 :  
0076 162 35$: BUG_CHECK NOTIRPAQB,FATAL ; Bad ACP queue entry  
0076 163 :  
007A 164 : MOVW IRP$W_FUNC(R3),R7 ; Get the I/O function code  
007E 165 : MOVL IRP$L_UCB(R3),R5 ; Get the UCB address  
0083 166 : CMPZV S^#IO$V_FCODE,S^#IO$S_FCODE,R7,S^#IO$_ACPCONTROL ; Control?  
0085 167 : BNEQ 30$ ; If NEQ no -Bad unsupported error  
008A 168 : BBS #IRP$V_COMPLX,IRP$W_STS(R3),30$ ; If BS then real ACPCONTROL  
0096 169 : MOVQ #$$$_NORMAL,- ; This is a cancel, so just post it  
0096 170 : IRP$C_IOST1(R3) ; with success and so  
FF67' 30 0096 170 : BSBW REM$POST ; ignore it.  
FF6F 31 0099 171 : BRW 10$ ; For another entry
```



```

009C 173
009C 174 :++
009C 175 :
009C 176 : REM$ALLOC_IRP - allocate an IRP-size block for use as a message buffer
009C 177 :
009C 178 : OUTPUTS:
009C 179 :
009C 180 : R2 - buffer address, with size and type filled in
009C 181 :
009C 182 :--
009C 183
009C 184 REM$ALLOC_IRP::
54 00000000'GF D0 009C 185 MOVL G^SCH$GL_CURPCB,R4 ; Set up my PCB address.
00000000'GF 16 00A3 186 JSB G^EXE$ALOCIRP ; Allocate a block (IRP's are easy to get)
00A9 187 SETIPL #0 ; Bring down the IPL
05 00AC 188 RSB ; Done
00AD 189
00AD 190 .END

```


REMGETIRP
Symbol table

- PROCESS IRP'S

B 6

16-SEP-1984 02:08:57 VAX/VMS Macro V04-00
5-SEP-1984 02:53:49 [REM.SRC]REMGETIRP.MAR;1

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(3)

AQBSB_MNTRNT	= 0000000B		
BUGS_NOTIRPAQB	*****	X	04
DYN\$C_IRP	= 0000000A		
DYN\$C_UCB	= 00000010		
EXESACLOCIRP	*****	X	04
EXESDEANONPAGED	*****	X	04
IO\$S_FCODE	*****	X	04
IO\$V_FCODE	*****	X	04
IO\$ACPCONTROL	*****	X	04
IRPSB_TYPE	= 0000000A		
IRPSL_IOST1	= 00000038		
IRPSL_UCB	= 0000001C		
IRPSV_COMPLX	= 00000003		
IRPSW_FUNC	= 00000020		
IRPSW_STS	= 0000002A		
PR\$ IPL	= 00000012		
RANGE	00000000	R	02
REMSALLOC_IRP	0000009C	RG	04
REMSCHK_ACPDONE	*****	X	04
REMSGL_Q_HEAD	*****	X	04
REMSKILL_UCB	*****	X	04
REMSMAIN	00000000	RG	04
REMSMBX_READ	*****	X	02
REMSPOST	*****	X	04
REMSRECV_MSG	*****	X	02
SCH\$GL_CORPCB	*****	X	04
SS\$ NORMAL	*****	X	04
SYSSHIBER	*****	GX	04
SY\$PURGWS	*****	GX	04
SY\$SETAST	*****	GX	04
UCBSB_ERTCNT	= 00000080		
UCBSB_TYPE	= 0000000A		
UNIT	00000000	R	03
WORK_VECTOR	00000008	R	02

+-----+
! Psect synopsis !
+-----+

PSECT name	Allocation	PSECT No.	Attributes
. ABS .	00000000 (0.)	00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
\$ABSS	00000000 (0.)	01 (1.)	NOPIC USR CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE
REM_PURE	00000010 (16.)	02 (2.)	NOPIC USR CON REL LCL NOSHR NOEXE RD NOWRT NOVEC BYTE
REM_IMPURE	00000002 (2.)	03 (3.)	NOPIC USR CON REL LCL NOSHR NOEXE RD WRT NOVEC BYTE
REM_CODE	000000AD (173.)	04 (4.)	NOPIC USR CON REL LCL NOSHR EXE RD NOWRT NOVEC BYTE

+-----+
! Performance indicators !
+-----+

Phase	Page faults	CPU Time	Elapsed Time
Initialization	31	00:00:00.09	00:00:00.32
Command processing	150	00:00:00.65	00:00:03.51
Pass 1	317	00:00:09.66	00:00:21.42
Symbol table sort	0	00:00:01.58	00:00:06.15

Pass 2	51	00:00:01.61	00:00:03.18
Symbol table output	5	00:00:00.07	00:00:00.06
Psect synopsis output	2	00:00:00.02	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	558	00:00:13.68	00:00:34.67

The working set limit was 1200 pages.
53234 bytes (104 pages) of virtual memory were used to buffer the intermediate code.
There were 60 pages of symbol table space allocated to hold 1082 non-local and 6 local symbols.
190 source lines were read in Pass 1, producing 17 object records in Pass 2.
22 pages of virtual memory were used to define 21 macros.

+-----+
! Macro library statistics !
+-----+

Macro library name	Macros defined
-----	-----
_\$255\$DUA28:[REM.OBJ]REM.MLB;1	0
_\$255\$DUA28:[SYS.OBJ]LIB.MLB;1	10
_\$255\$DUA28:[SYSLIB]STARLET.MLB;2	8
TOTALS (all libraries)	18

1184 GETS were required to define 18 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS\$:REMGETIRP/OBJ=OBJ\$:REMGETIRP MSRC\$:REMGETIRP/UPDATE=(ENH\$:REMGETIRP)+EXECML\$/LIB+LIB\$:REM/LIB

0312 AH-BT13A-SE
VAX/VMS V4.0

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